



K A N S A S

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Anthrax Q&A

What is anthrax?

Anthrax is an acute infectious disease caused by spore-forming *Bacillus anthracis* bacteria. Since September 11, 2001 and subsequent anthrax mailings, awareness about the possible use of anthrax by terrorists as a biological weapon has increased. Anthrax most commonly occurs naturally in cattle, sheep, goats, camels, antelopes, and other animals, but it is rare to find infected animals in the United States. Anthrax spores can live in soil for decades.

A person can be exposed to anthrax without having the disease. A person is considered exposed to anthrax only when that person comes in contact with the anthrax bacteria and a culture taken from that person is positive for anthrax. Disease caused by anthrax occurs when there is some sign of illness, such as the skin lesion that occurs with cutaneous (skin) anthrax. A person who is exposed to anthrax but is given appropriate antibiotics can avoid developing disease.

How is anthrax transmitted and what are the symptoms?

Anthrax infection can occur in three forms: cutaneous (skin), inhalation, and gastrointestinal. Symptoms of disease vary depending on how the disease was contracted, but symptoms usually occur within 7 days.

Cutaneous (Skin): Skin infection begins as a raised itchy bump that resembles an insect bite but within 1-2 days develops into a vesicle and then a painless ulcer, usually an inch or less in diameter, with a characteristic black necrotic (dying) area in the center. Lymph glands in the adjacent area may swell. About 20% of untreated cases of cutaneous anthrax will result in death. Deaths are rare with appropriate therapy.

Inhalation: Initial symptoms may resemble a common cold. After several days, the symptoms may progress to severe breathing problems and shock. Inhalation anthrax is nearly always fatal. The sooner treatment is started, the greater the chance of survival.

Intestinal: The intestinal disease form of anthrax may follow the consumption of contaminated meat and is characterized by an acute inflammation of the intestinal tract. Initial signs of nausea, loss of appetite, vomiting, and fever are followed by abdominal pain, vomiting of blood, and severe diarrhea. Intestinal anthrax results in death in 25% to 60% of cases.

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Can anthrax be spread from person-to-person?

Direct person-to-person spread of anthrax is extremely unlikely to occur. Communicability is not a concern in managing or visiting with patients with inhalation anthrax.

When is the collection of nasal swabs useful?

There is no medical screening test for anthrax; the only way exposure can be determined is through a public health investigation. When a possible anthrax exposure occurs at a known time, nasal swabs are quickly performed as one of the environmental tests to determine where airborne spores may have traveled. Nasal swabs should not be used to diagnose cases of anthrax or to evaluate whether a person has been exposed to *B. anthracis*.

A positive nasal swab suggests that you were recently in the vicinity of airborne anthrax spores – it does NOT necessarily mean that you received enough bacteria to make you sick. A negative nasal swab does not provide ANY information – it does not rule out the possibility that you were exposed to airborne anthrax if there was a release into the environment near you.

Why are environmental scans done even after nasal swabbing is no longer performed?

Unlike the human body, equipment does not have a “self-cleaning” mechanism. Equipment and surfaces may still be contaminated with anthrax spores for a period of time after an exposure has occurred. For this reason, it still makes sense to “swab tables” for some time after it no longer makes sense to “swab noses.”

Is there a treatment for anthrax?

Doctors can prescribe effective antibiotics. To be effective, treatment should be initiated early. If left untreated, the disease can be fatal.

Who should get vaccinated against anthrax?

Anthrax vaccination is recommended only for the following groups:

- Persons who work directly with anthrax in a laboratory
- Persons who work with imported animal hides or furs in areas where standards are insufficient to prevent exposure to anthrax spores.
- Persons who handle potentially infected animal products in high-incidence areas. (Incidence is low in the United States, but veterinarians who travel to work in other countries where incidence is higher should consider being vaccinated.)
- Military personnel deployed to areas with high risk for exposure to the organism (where anthrax may be used as a biological weapon).
- Pregnant women should be vaccinated only if absolutely necessary.

Where can I get more information about the Department of Defense decision to require men and women in the Armed Services to be vaccinated against anthrax?

The Department of Defense recommends that servicemen and women contact their chain of command with questions about the vaccine and its distribution. The anthrax Vaccine Immunization Program in the U.S. Army Surgeon General's Office can be reached at 1-877-GETVACC (1-877-438-8222).

<http://www.anthrax.osd.mil>